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09/747,036	12/21/2000	Wayne D. Ward	RA-5256	4678

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EXAMINER
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TRUONG, LECHI

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/747,036

Applicant(s)

WARD ET AL.

Examiner

LeChi Truong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claim 1 recites the limitation "said queue bank reference" in line 15. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 103*

2. Claims 1-3, 9-12 14, 15, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (US. Patent 6,308,219 B1) in view of Krantz et al (US. Patent 5,944,788) and further in view of Ahn (US 6,466,575 B1).

As to claim 1, Hughes teaches a repository of memory (the receive memory 160, col 4, ln 1-67), memory address space (offsets of memory, col 4, ln 50-67, col 5, ln 1-16), entry (node, col 4, ln 1-67), a current value which indicates a next available entry (a set of entries 211 each of which points to either a subnode 210 or to an associated leaf 220, col 4, ln 1-67), a header memory value (a root node, col 4, ln 1-67/ col 5, ln 19-50), current value (the variable of responsive to the nature of the packet traffic, col 4, ln 15-48), a manager ( a receive memory controller 150, col 3, ln 1-5/ col 4, ln 1-49), queue bank ( memory bank, col 4, ln 1-67 ).

Hughes does not explicit teach a function for generating a token, and indication of header memory value, a client process, reference, a functionality for storing said queue bank reference. However, Krantz teaches a get token operation / return token operation (col 9, ln 55-67 to col 10, ln 1-67), indicate which particular slot may be used for particular message queue, col 4, ln 20-55), sending module caculates... executes (col 27, ln 1-25).

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It would have been obvious to apply the teaching of Krantz to Hughes in order to allow a specific computer system to maintain a chronological ordering of messages that being sent from a sending module to a receiving module.

Hughes does not teach storing reference. However, Ahn teaches a message pointer is placed ( col 4, ln 30-65/ col 2, ln 15-67 to col 3, ln 1-21).

It would have been obvious to apply the teaching of Ahn to Hughes in order to reduce the size of data duplication in required when performing a message passing between systems.

**As to claim 2**, Hughes teaches an instruction for storing (routing treatments for received, col 3, ln 1-20).

**As to claim 3**, Hughes does explicit teach term reading a value and storing value by header. However, Ahn teaches common header stores and processes the protocol data for transmitting (col 2, ln 16-67/ col 3, ln 1-30/ col 4, ln 15-60).

It would have been obvious to apply the teaching of Ahn to Hughes in order to reduce the size of data duplication in required when performing a message passing between systems.

**As to claim 9**, Hughes does not teach tokens have a size to hold. However, Krantz teaches token is 8-bit value (col 11, ln 1-10).

It would have been obvious to apply the teaching of Krantz to Hughes in order to represent a physical slot inside a message queue.

**As to the method claim 10**, refer to the rejection of claim 1. Further, Hughes teaches a queue bank repository. Further, Hughes teaches removing said queue bank form the visible address space (memory banks are deleted, col 5, ln 20-47).

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**As to claim 11**, Hughes teaches reading (routing treatments for transmission, col 4, ln 1-67), storing (routing treatment for receiving, col 4, ln 1-67).

**As to claim 12**, Hughes does not teach token include an indication of said last available entry address location. However, Krantz teaches tokens indicate which particular slot may be used for particular message queue (col 4, ln 21-55).

It would have been obvious to apply the teaching of Krantz to Hughes in order to allow a specific computer system to maintain a chronological ordering of messages that being sent from a sending module to a receiving module.

**As to claim 14**, Hughes does not teach an indication of said last available entry address location. However, Krantz teaches all bits space in the vector are set to 1, this indicates the message queue for that module is full (col 16, ln 40-55).

It would have been obvious to apply the teaching of Krantz to Hughes in order to indicate when message should be written to the memory.

**As to claim 15**, Hughes does not teach if the repository is full, providing an interrupt. However, Krantz teaches the module is full thus the sender must wait some undefined (col 16, ln 40-55).

It would have been obvious to apply the teaching of Krantz to Hughes in order to make the sharing limited queue banks in memory more consistent.

**As to claim 17**, Hughes does not teach an indication. However, Krantz teaches all bits space in the vector are set to 1, this indicates the message queue for that module is full (col 16, ln 40-55).

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It would have been obvious to apply the teaching of Krants to Hughes in order to indicate when message should be written to the memory.

**As to the method of claim 18**, refer to the rejection of claim 1. Further, Hugher teaches retrieving queue bank (routine treatments for packets for transmission, col 4, ln 1-15), establishing said retrieved queue bank (tree structure 200 is designed, col 4, ln 1-67).

**As to the method of claim 19**, see the rejection of claim 18. Further, Hughes does not teach a false token, a status indicating that the token was not valid. However, Krantz teaches an empty queue condition indicates the token value is invalid and there was no token available (col 11, ln 25-54).

It would have been obvious to apply the teaching of Krantz to Hughes in order to indicate an error during transferring message between the systems.

**As to the system of claim 20**, see the rejection of claim 10 and claim 18.

**As to the system of claim 21**, see the rejection of claim 19.

2. Claims 4, 5, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (US. Patent 6,308,219 B1) in view of Krantz et al (US. Patent 5,944,788) and further in view of Ahn (US 6,466,575 B1) and further in view of Faris et al (US. 5,488,359).

**As to claim 4**, Hughes does not explicit teach a functionality for clearing a value. However, Faris teaches deleting a previously stored message from memory (col 2, ln 1-35).

It would have been obvious to apply the teaching of Faris to Hughes in order to provide the amount space available in the memory.

**As to claim 5**, Hughes does not explicit teach a status indicating the repository is full. However, Faris teaches an indication of memory full (col 2, ln 1-35).

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It would have been obvious to apply the teaching of Faris to Hughes in order to avoid unnecessary deletion of previously stored message.

**As to claim 13**, Hughes does not explicit teach a status indicating the repository is full. However, Faris teaches an indication of memory full (col 2, ln 1-35).

It would have been obvious to apply the teaching of Faris to Hughes in order to avoid unnecessary deletion of previously stored message.

3. Claims 6, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (US. Patent 6,308,219 B1) in view of Krantz et al (US. Patent 5,944,788) and further in view Jitsupou (extended memory address control system)

**As to claim 6**, Hughes does not teach an operating system to allocate a new space. However, Jitsupou teaches the extended memory be handed by operating system (page 1).

It would have been obvious to apply the teaching of Jitsupou in order to improve access performance.

**As to claim 16**, Hughes does not teach provides for more available entry address locations. However, Jitsupou teaches the extended memory be handed by operating system (page 1).

It would have been obvious to apply the teaching of Jitsupou in order to improve access performance.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (US. Patent 6,308,219 B1) in view of Krantz et al (US. Patent 5,944,788) in view Faris et al (US. 5,488,359) and further in view of Jitsupou (extended memory address control system).

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**As to claim 7**, Hughes teaches set of memory address space (tree structure 200, col 4, ln 1-20).

Hughes does not explicit teach the repository is full. However, Faris teaches memory full (col 2, ln 1-35).

It would have been obvious to apply the teaching of Faris to Hughes in order to avoid unnecessary deletion of previously stored message.

Hughes does not teach extended memory address. However, Jitsupou teaches the extended memory (page 1).

It would have been obvious to apply the teaching of Jitsupou to Hughes in order to improve access performance.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (US. Patent 6,308,219 B1) in view of Krantz et al (US. Patent 5,944,788) in view Faris et al (US. 5,488,359) and further in view of Cuthbertson et al (US. 5,524,227)

**As to claim 8**, Hughes does not teach token is available in plurality of different formats. However, Cuthbertson teaches token types (col 2, ln 5-67).

It would have been obvious to apply the teaching of CT to Hughes in order to make message passing from and to sharing memory more consistent.

## 6. **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5.



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Fax phone: AFTER\_FINAL faxes must be signed and sent to: (703) 746-2738, OFFICAL faxes must be signed and send to: (703) 746-7239, NON OFFICIAL faxes should not be signed, please send to: (703) 746-7240

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 9000.

LeChi Truong  
November 10, 2003



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